# Forest Plan Components—Desired Conditions

A desired condition is a description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates (36 CFR 219.7(e)(1)(i)). Desired conditions do the following:

May be the same as existing conditions

May only be achieved in the long-term. If desired conditions cannot be achieved or are no longer valid or relevant to the long-term multiple-use management of the plan, the plan should be amended or revised

May apply to the entire plan area, or to specific management or geographic areas

Must not direct taking action or prohibit taking action or indicate specific agency actions (must not use terms like “must”, “will”, or “shall”) or tools (prescribed fire, thinning) for reaching or maintaining the desired condition

Should be expressed in a way that help forest managers determine the uses that are suitable and the possible management actions that may be proposed during the planning period

Should be written with enough detail so that the intent is clear and progress toward their achievement can be monitored

May be stated in comparative terms such as “more,” or “less,” or “increased,” or “decreased” if the baseline is clearly stated

May be stated in terms of a range of conditions

Are informed by the best available science

## Examples

***Example 1—Desired Condition by Major Vegetation Type***

| Vegetation Type[a] | Development Stage[a] | Current Condition[b](% of vegetation type) | Historic Range of Variation[c] (% of vegetation type) | Desired Condition[d] (% of vegetation type) |
|---|---|---|---|---|
| Spruce-Fir | young | 1.5 | 0–45 | 10–20 |
| | mid | 6.5 | 5–47 | 20–30 |
| | mature | 70 | —[e] | 30–40 |
| | over mature | 22 | —[e] | 25–35 |
| Cool-Moist Mixed-Conifer | young | 0.5 | 1–36 | 10–20 |
| | mid | 10 | 8–49 | 20–30 |
| | mature | 79 | —[e] | 30–40 |
| | over mature | 11 | —[e] | 20–30 |
| Aspen | young | 1 | 1–55 | 15–25 |
| | mid | 31 | 4–55 | 25–35 |
| | mature | 68 | 35–86 | 50–60 |
| Warm-Dry Mixed-Conifer | young | 0.5 | 1–10 | 10–15 |
| | mid | 8.5 | 5–14 | 10–15 |
| | mature-open | 4.5 | —[e] | 35–45 |
| | mature-closed | 77 | —[e] | 15–25 |
| | over mature | 10 | —[e] | 20–30 |
| Ponderosa Pine | young | 0.5 | 1–14 | 5–10 |
| | mid-open | 3.5 | 4–14 | 5–10 |
| | mid-closed | 4 | 4–14 | 5–10 |
| | mature-open | 35 | —[e] | 40–60 |
| | mature-closed | 55 | —[e] | 15–25 |
| | over mature | 2.5 | —[e] | 10–15 |

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[b]SJPL R2VEG

[c]RMLANDS

[d]Interdisciplinary Team

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**Spruce-Fir Forests—**Spruce-fir forests display variable stand structures and species composition. Most are dense with closed canopies and multiple canopy layers. Patches of spruce-fir forest, ranging from small to large, are distributed across the landscape. The canopy cover of shrubs in the understory of these forests is highly variable. Native herbs are common and well-distributed in most spruce-fir forests. Forest litter is common and well-distributed. Invasive plant species are absent or rare. Snags and large wood (on the ground) are abundant in late successional stages. High-intensity, stand-replacement fires occur in most spruce-fir forests (with frequencies longer than 200 years). All development stages of these forests are well-represented, including the young- and mid-stages that are currently under-represented.

**Cool-Moist Mixed Conifer Forests—**Cool-moist mixed conifer forests display variable stand structures and species composition. Most are dense with closed canopies and multiple canopy layers. Tree species composition includes an abundance of Douglas-fir trees (ranging from young to old). Patches of cool-moist conifer forest, ranging from small to large, are distributed across the landscape. The canopy cover of shrubs in the understory of these forests is highly variable. Native herbs are common and well-distributed in most cool-moist mixed-conifer forests. Forest litter is common and well-distributed. Invasive plant species are absent or rare. Snags and large wood (on the ground) are abundant in late successional stages. High-intensity, stand-replacement fires occur in most cool-moist mixed-conifer forest (with frequencies of about 144 years). All development stages of these forests are well-represented, including the young- and mid-stages that are currently under-represented.

**Aspen and Aspen-Conifer Forests—**Aspen and aspen-conifer forests display variable stand structures, with most having high stem densities and high canopy cover. Some stands are even-aged with one or two canopy layers; mothers are uneven-aged with multiple canopy layers. Patches of aspen and aspen-conifer forests, ranging from small to large, are distributed across the landscape. The canopy cover of shrubs in the understory of these forests is highly variable. Native herbs are abundant and well-distributed in most aspen and aspen-conifer forests. Forest litter is common and well-distributed. Invasive plant species are absent or rare. Snags and large wood (on the ground) are abundant in late successional stages. Fires occur in most aspen and aspen-conifer forests (with frequencies of about 140 years). All development stages of these forests are well-represented, including the young-stage that is currently under-represented.

**Warm-Dry Mixed Conifer Forests—**Warm-dry mixed-conifer forests display variable stand structures and species composition. Most have open canopies with widely spaced trees and multiple canopy groups surrounded by shrub and/or herb-dominated openings. Tree species composition includes an abundance of ponderosa pine and Douglas-fir trees (ranging from young to old). White fir trees are present, but are not dominant. The abundance and distribution of Gambel oak and other native shrubs in the understory is variable, and includes small and large patches of all size classes. Native herbs (including tall bunchgrasses) are common and well-distributed in most warm-dry mixed-conifer forests. Forest litter is common and well-distributed. Invasive plant species are absent or rare. Snags and large wood (on the ground) are common in late successional stages, as well as in young stands, following disturbance. Low-intensity, surface fires occur in most warm-dry mixed-conifer forests (with frequencies ranging from about 18–28 years). All development stages of these forests are well-represented, including the old-growth stage that is currently under-represented.

**Ponderosa Pine Forests**—Ponderosa pine forests display variable stand structures. Most have open canopies with widely spaced trees and multiple canopy layers. Some are dense with closed canopies; others have a clumped structure where trees occur in groups surrounded by shrub and/or herb-dominated openings. Ponderosa pine seedlings and saplings are present, and large old, yellow-barked ponderosa pine trees are present. The abundance and distribution of Gambel oak and other native shrubs in the understory of these forests is variable and includes small and large patches of all size classes. Native herbs (including bunchgrasses, Arizona fescue, muttongrass and mountain muhly) are present and well-distributed in most ponderosa pine forests. Forest litter is common and well-distributed. Invasive plant species are absent or rare. Snags and large wood (on the ground) are common in late successional stages, as well as in young stands, following disturbance. Low-intensity, surface fires occur in most ponderosa pine forests (with frequencies ranging from about 12–30 years). All development stages of these forests are well-represented, including the old-growth stage that is currently under-represented.

**Mountain Shrublands—**Mountain shrublands display variable stand structures. Most are dense with multiple canopy layers; others are open with widely spaced shrubs. Gambel oak and other deciduous native shrubs (including mountain mahogany, serviceberry, chokecherry, fendlerbush, and squawapple) are abundant and well-distributed. Native herbs are abundant and well-distributed.

**Sagebrush Shrublands—**Sagebrush shrublands display variable stand structures. Some are open with widely spaced shrubs; others are dense. Some large patches are present. Sagebursh and other native shrubs are abundant and well distributed. Native perennial bunchgrasses (including Indian ricegrass, galleta, Western wheatgrass, and needle-and-thread, which are currently lacking on many sites) are abundant and well-distributed. Encroachment of pinyon and juniper trees is absent or rare. Invasive plant species are absent or rare. Biological soil crusts are common and well-distributed on many sites.

**Mountain Grasslands—**Mountain grasslands display moderate to high canopy cover of desirable native herbs (including Arizona fescue at mid-elevations and Thurber fescue at higher elevations). Invasive plant species and undesirable native plant species that are currently abundant on many sites are absent or rare. Forest litter is common and well-distributed.

**Alpine—**Alpine ecosystems sustain their ecosystem diversity. They maintain the ecological attributes and processes that allow them to provide watershed values, habitat for native biota, panoramic vistas, and/or for solitude. They display a diverse composition of desirable native plant species and vegetation communities (including fellfiel, turf, wetland, and dwarf willow types). Invasive plant species are absent or rare.

### *Example 2—Desired Condition for Aquatic Habitat*

Water bodies, riparian vegetation, and adjacent uplands provide habitats that support self-sustaining native and desired nonnative aquatic communities, which include fish, amphibians, invertebrates, plants, and other aquatic-associated species. Aquatic habitats are diverse, with channel characteristics and water quality reflective of the climate, geology, and natural vegetation of the area. Water quality supports native amphibians and diverse invertebrate communities. Streams, lakes, and rivers provide habitats that contribute toward recovery of threatened and endangered fish species and address the habitat needs of all native aquatic species. Connectivity between water bodies provides for life history functions (e.g., fish migration to spawning areas, amphibian migration between seasonal breeding, foraging, and over wintering habitats) and for processes such as recolonization of historic habitats. Seasonal habitats for amphibians are located in proximity such that migration across roads is unnecessary. Conservation watersheds (see CER) maintain habitats that can support population strongholds of federally listed species, species of concern, and species of interest.

*Desired Condition for Stream Habitat Features*

Stream channels provide the structure for desired stream habitat features such as pool frequency, residual pool depth, in stream large woody material, bank stability, and width-to-depth ratios. Habitat features are influenced by stream gradient, channel and floodplain width, elevation, geology, and other factors. Therefore, while the following criteria generally describe desired habitat conditions, these values are not achievable in all channels.

Stream water temperatures are within the requirements for salmonid spawning and cold water biota and bull trout:

Salmonid spawning: maximum is less than or equal to 13 °C (55.4 °F); maximum daily average is less than or equal to 9 °C (48.2 °F).

Cold Water biota: maximum is less than or equal to 22 ºC (71.6 °F); maximum daily average is less than or equal to 19 °C (66.2 °F).

Bull trout: maximum weekly maximum temperature (MWMT) for June, July, and August is ≤13 °C (55.4 °F); mean daily average (September, October) is ≤9 °C (48.2 °F).

Large woody debris occurs in near natural patterns of size and amount in channel, stream banks, and floodplain. Adequate sources of large woody debris are available for both long- and short-term recruitment based on riparian stocking densities.

Pool frequency varies by reach type:

1 per 5 to 7 channel widths in pool-riffle reaches

1 per 2 to 4 channel widths in step-pool stream reaches

Large pools (residual pool depth of more than 1.0 meter (3.28 feet)) for adult holding, juvenile rearing and over wintering are common (in streams more than 3.0 meters (9.84 feet) wetted width).

Channel substrate is appropriate in size and distribution based on geology, and supports spawning, macroinvertebrate production, and juvenile rearing.

Bankfull width-to-depth ratios are appropriate to channel type:

≤12 in A, E, G channel types

≥12 in B, C, F channel types

>40 in D channel types

Bank stability in forested stream reaches:

≥90% stable in C channel types

≥95% stable in A, B, and E channel types

### *Example 3—Desired Condition for Social/Economic topics*

## Principles

### *Social Well-being*

**Collaborative Stewardship (Criteria)—**includes DC ("…strengthen communication, openness, and partnerships…contribute to achievement of vision and DCs…")

**Participating and Engaging (Indicator)—**includes DC ("…fair, open, and accessible…Diverse values recognized…enhances existing and new relationships/partnerships…commitment to building understanding/trust through involvement")

**Networks, timing, funding, participant feedback (Measure)**

### *Economic Well-being*

**Goods and Services, and Other Values (Criteria)—**includes DC ("Forest should contribute to desired social, ecological, and economic goods and services and other values"); includes explanation ("People depend on NF directly and indirectly…goods/services generated by natural, built (institutions), and human capital…decisions identify how flows are used as goods/services (consumption)")

**Goods and Services (Indicator)—**includes DC ("Produce sustainable flows of goods and services from natural capital within regenerative capabilities of ecosystems", includes explanation ("Flows (interest from capital) used as goods and services, affect quantity and quality of flows and capital generating the flows (stock versus production description)")

**Quantity of flows that are consumptive or exclusionary uses (Measure)—**includes volume of timber, minerals permits, user days etc., grazing permits

### *Examples*

*Example 1—Social Well-being/Collaborative Stewardship/Stewardship Activities*

Outputs and values generated by the Forest contribute to sustaining social and economic systems.

The outputs and values provided by the Forest contribute to the local economy through the generation of jobs and income while creating products for use, both nationally and locally. Jobs and income generated by the activities and outputs from National Forest management remain stable, contributing to the functional economy surrounding the Forest

The outputs and values provided by the Forest contribute to the community stability or growth and the quality of lifestyles in the Plan area.

To the extent possible, the Forest contributes to the protection of communities and individuals from wildfire within the limits of firefighter safety and budgets.

*Example 2—Economic Sustainability*

Plan Contributes to local economies by supporting approximately 50 local jobs (primary and secondary) and $XXX,XXX dollars in labor income within the counties surrounding the Forest (X, Y, and Z county in Idaho), annually.